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NEW BEDFORD SITE MASSACHUSETTS

EPA ID# MAD980731335
EPA REGION 1
Bristol County, 55 miles south of Boston

Site Description

The 18,000-acre New Bedford site is an urban tidal estuary consisting of a harbor and bay that are highly contaminated with polychlorinated biphenyls (PCBs) and heavy metals. Manufacturers in the area used PCBs while producing electric capacitors from 1940 to 1978. Until the late 1970s, when the use of PCBs was banned by the EPA, factories discharged industrial process wastes containing PCBs into the harbor. As a result, PCB contamination in the New Bedford Harbor area is widespread. The harbor is contaminated to one degree or another for at least 6 miles, from the upper Acushnet River into Buzzards Bay. Approximately 98,500 people are living within 3 miles of the site. A 5-acre northern portion of the Acushnet River Estuary was contaminated with high levels of PCBs (about 20,000 ppm on average) and has been identified as the "hot spot" area of the site. Measurements taken at the site indicate tidal action transports about one half pound per day of PCBs from the upper harbor to the lower harbor and ultimately, into the larger bay. The contamination of the harbor and bay sediments by high concentrations of PCBs has resulted in closing the area to lobstering and fishing, and has limited recreational activities and harbor development.

Site Responsibility: This site is being addressed through Federal and Commonwealth actions.

Threats and Contaminants

PCBs and heavy metals, notably cadmium, lead, copper, and chromium, have been identified in sediments, soil, and marine life. The major public health risks involve coming into direct contact with contaminated sediments and ingesting contaminated fish and shellfish from the area. Levels of PCBs in some fish and lobsters at the site exceed the Food and Drug Administration's (FDA) limit for PCBs in edible seafood. There is an increased risk of cancer and other diseases for people who repeatedly eat PCB-contaminated seafood from the site. Currently, fishing is restricted to minimize this risk. The risk to plant or animal life is greatest for bottom-dwelling

organisms that have direct contact with contaminated sediments.

Cleanup Approach
This site is being addressed in four stages: initial actions and three long-term remedial phases focusingon the hot spot area, the Acushnet River and New Bedford harbor, and the Buzzards Bay Area.

Response Action Status
Initial Actions: In 1982, the Coast Guard erected signs warning the public of the presence of PCBs in the harbor and industrial areas. The Commonwealth intensified efforts to restrict access to the harbor. Bilingual warning signs in English and Portuguese were posted along the New Bedford and Fairhaven shoreline. When the signs were destroyed by winter weather, the EPA replaced them. In 1985, 2000 feet of chain-link fence at two recreational facilities were erected to keep people out of the contaminated areas. In 1992, additional signs with warnings in English, Portuguese, and Spanish were installed along the shoreline. Maintenance of these and other, newer signs continues as needed.

Hot Spot Area: In 1983, the EPA began to evaluate alternatives for addressing harbor contamination. In 1985, the investigation was expanded, allowing the Army Corps of Engineers to conduct demonstrations of dredging equipment and construction and testing of disposal facilities in the estuary, while continuing to carry out site sampling, analysis, and research. Hydraulic dredges were tested, sediment disposal facilities were built, and extensive environmental monitoring was conducted to determine whether dredging and construction activities could occur without spreading contaminants. The engineering study conducted by the Corps was used by the EPA to design the cleanup approach for the site. The EPA's original remedy for the hot spot area included dredging and incineration of contaminated sediments above 4000 ppm PCBs to permanently reduce the migration of contaminants throughout the harbor area. Due to local and congressional opposition to incineration, the EPA has elected to postpone the incineration component of the hot spot remedy, and explore alternative treatment technologies. Dredging of the 14,000 cubic yards of hot spot sediment was completed in September 1995, the dredged sediment is being held in a lined and covered holding pond until treatment takes place. Decanted seawater from the sediments during dredging was treated on site. Pilot studies of solidification and chemical destruction technologies began in the fall of 1995.

Acushnet River & New Bedford Harbor: The EPA is currently evaluating different alternatives for cleaning

up this portion of the site. The EPA has been meeting extensively with the local communities to build a consenses for this second phase of cleanup. About half a million cubic yards may require dredging and disposal. The EPA plans to issue a proposed cleanup plan for this area in 1996, after which design and construction of the cleanup activities will begin. Given the scale of contamination in this area, ten years may be required for completion of all design and construction activities.

Buzzards Bay Area: The EPA plans to initiate additional investigations of this area of the site (south of the hurricane barrier) to determine if additional cleanup is necessary.

Site Facts: In 1982, the EPA entered into Consent Agreements with two companies to address the PCB contamination on their properties. The EPA, the Commonwealth of Massachusetts, and five companies that used PCBs have reached settlement regarding the EPA's claims.

Environmental Progress
Posting warning signs, fencing contaminated areas and dredging the hot spot area sediments have reduced the threat posed by the site while further investigations leading to the selection of final cleanup remedies are conducted.

Site Repository
Wilkes Branch New Bedford Free Library, 1911 Acushnet Avenue, New Bedford, MA (508) 991-6214

For more information about this site, contact Dave Dickerson at 617-573-5707.

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indicates CDE
involved in Norwood
site per E. Weiss

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NORWOOD PCBs MASSACHUSETTS

EPA ID# MAD980670566
EPA REGION 1
Norfolk County, Kerry Place in Norwood
Other Names: Grant Gear, Inc. and Dean Street Site

Site Description

The Norwood PCBs site is located on 26 acres of mainly commercial and industrial properties. The site is bordered by Route 1, the Dean Street access road, Meadow Brook, Pellana Road, and Dean Street. The site consists of several parcels of land, including the former Grant Gear facility, Kerry Place; and adjacent areas including Meadow Brook. In 1979, the site was subdivided. The northeastern portion of the site, approximately 9 acres in size, was purchased by Grant Gear Realty Trust and leased to Grant Gear Works, Inc. The southern and western portions of the site were further subdivided, a major portion of which was named Kerry Place. Most of the lots now are occupied by commercial and light industrial buildings. Beginning in the 1940s, previous owners or operators of the Grant Gear building used polychlorinated biphenyls (PCBs) in the production of electrical transformers and other electrical components. In 1983, the State detected high levels of PCBs in the soil on the site, and the EPA conducted an emergency removal of contaminated soil. Approximately 8,000 people live within 1 mile of the site.

Site Responsibility: The site is being addressed through Federal and Commonwealth actions.

Threats and Contaminants

Groundwater is contaminated with PCBs and volatile organic compounds (VOCs) such as trichloroethylene (TCE) and vinyl chloride. Soil and sediments are contaminated with PCBs, polycyclic aromatic hydrocarbons (PAHs), and heavy metals. People are at risk when coming into direct contact with or accidentally ingesting contaminated groundwater, soil, and sediments. Increased risk may be posed if on-site groundwater, left untreated, were used as a drinking water source. The concentrations of PCBs in the sediments in Meadow Brook may pose an increased risk to aquatic organisms. Exposure to PCB-contaminated soils also may pose a threat to animal life inhabiting the site area.

Cleanup Approach
The site is being addressed in two stages: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status
Initial Actions: In 1983, the EPA conducted an emergency removal of over 500 tons of highly contaminated soil from the site and transported it to an approved disposal facility. In 1986, the Commonwealth installed a 4-foot-high wire mesh fence around a 1«-acre portion of the northwestern and southwestern corners of the Grant Gear property and covered contaminated soils within the fenced areas. The cover consisted of a filter-fabric liner and 6 inches of crushed stone.

Entire Site: The remedies selected by the EPA in 1989 to clean up the site include excavating soils, dredge material, and sediments; treating them by solvent extraction of PCBs and disposing of them on site; flushing or replacing the site drainage system; cleaning equipment surfaces; collecting groundwater and removing the contaminants using air filtering to convert volatile chemicals to a gas (activated carbon will be used before or after the air filtration step to remove PCBs); and restoring the wetlands after minimizing the effects on the wetlands during the cleanup of Meadow Brook sediments. Construction of the facility to treat contaminated groundwater began operations in early 1996. EPA is now considering a change in the remainder of the remedy for site soil and sediments and for the industrial building on site.

Site Facts: The Commonwealth originally investigated the site in response to a telephone call from an area resident.

Environmental Progress
The initial cleanup actions described above have removed contaminated sources and restricted access to the site, thereby reducing the potential of exposure to hazardous substances at the Norwood PCBs site while final cleanup activities are being planned and conducted.

Site Repository
Morrill Memorial Library, Walpole Street, Norwood, MA 02062

For more information about this site, contact Bob Cianciarulo at 617-573-5707.

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SULLIVAN'S LEDGE MASSACHUSETTS

EPA ID# MAD980731343
EPA REGION 1
Bristol County, New Bedford

Site Description

The 12-acre Sullivan's Ledge disposal area, in the northwestern corner of New Bedford, operated as a quarry until about 1932. In 1935, the City of New Bedford acquired the site through tax title foreclosure. Between the 1940s and the 1970s, local industries used the quarry pits and adjacent areas for disposal of hazardous material and other wastes including electrical capacitors, fuel oil, volatile liquids, tires, scrap rubber, demolition materials, brush and trees. After a fire at the site in the 1970s, the City backfilled the only existing open pit and covered all exposed refuse. In 1982, when the Massachusetts Department of Public Works drilled test borings as part of a plan to build a commuter parking lot, electrical capacitors, which may have caused polychlorinated biphenyl (PCB) contamination, were unearthed. Approximately 98,500 people live within 3 miles of the site in this residential area. Within 1 mile of the site are two nursing homes and three schools. The New Bedford Municipal Golf Course is located immediately north of the site. An unnamed stream borders the site and discharges into Middle Marsh, which is on the golf course. Immediately north of the marsh lie railroad tracks, the Apponagansett Swamp, and the City of New Bedford municipal landfill.

Site Responsibility: The site is being addressed through Federal and potentially responsible parties' actions.

Threats and Contaminants

In 1982, the EPA detected PCBs in ambient air. Volatile organic compounds (VOCs) in the on-site and immediately off-site groundwater increase with depth. Inorganic compounds and PCBs also are present in the groundwater. The soil is contaminated with PCBs and polycyclic aromatic hydrocarbons (PAHs). The soils along the eastern and southern boundaries contain the highest contaminant concentrations. Soils have eroded from the site into the unnamed stream and have been transported from the site. Sediments in the unnamed stream, Middle Marsh, four golf course water hazards, and a portion of the Apponagansett Swamp are contaminated with PCBs. People may become exposed

to the contaminated dusts stirred up at the site. At the busy golf course, people may be exposed to contaminants in soil and sediments, particularly from dry intermittent stream beds.

Cleanup Approach
The site is being cleaned up in three stages: an initial action and two long-term remedial phases focusing on cleanup of the Sullivan's Ledge Disposal Area and the Middle Marsh.

Response Action Status
Initial Action: The City of New Bedford erected a fence around the Sullivan's Ledge Landfill from 1984 to 1985 to limit the potential for exposure to hazardous materials at the site.

Sullivan's Ledge Disposal Area: The EPA has chosen the following remedies for cleaning up the disposal area portion of the site: establish security measures, connect the site to power lines, and furnish sanitary facilities; excavate and dispose of sediments from the stream and the golf course water hazards; construct an impermeable cap over an 11-acre area to cover the quarry pits and contain the contaminated surface soils and sediments that would be placed on site; divert and line a portion of the unnamed stream to prevent water from being pulled into extraction wells; install an active pumping system to collect contaminated shallow bedrock groundwater, a passive collection system to collect contaminated seeps and shallow groundwater, and a treatment system to treat collected groundwater; restore and enhance the wetlands to reasonably similar hydrologic and botanical conditions that existed prior to excavation; monitor the site with 5-year reviews; and use institutional controls to ensure that the bedrock groundwater will not be used for drinking water since it cannot be cleaned to drinking water standards. The technical design of these selected remedies began in 1991, and is scheduled to be completed in 1996. Construction is scheduled to begin in late 1996 or early 1997.

Middle Marsh: In 1989, the EPA began a study of the contamination in the Middle Marsh sediments. In 1991, the EPA released results of the studies undertaken, which indicated significant PCB accumulation in wildlife in and around Middle Marsh. While sediments in the Marsh also were found to be heavily contaminated with PCBs, the threat to human health was judged to be negligible. A decision on the appropriate cleanup remedy was reached in late 1991. The EPA chose the following remedy for Middle Marsh: establish security measures and clear the land; excavate contaminated sediments from portions of the Middle Marsh and the adjacent wetland; screen and dewater the excavated sediments; dispose of the

excavated materials beneath the cap to be constructed at the Sullivan's Ledge Disposal Area; restore the affected wetlands; use institutional controls to prevent future residential use of and restrict access to the area; and establish a long-term environmental monitoring plan. In the event that the Sullivan's Ledge Disposal Area would be unavailable for disposal, the EPA also selected a contingency remedy which includes the same site preparation, excavation, wetlands restoration, institutional controls and long-term monitoring as the remedy described above; however, excavated sediments would be treated by solvent extraction and replaced within Middle Marsh. The technical design of these selected remedies began in 1993 and is expected to be completed in 1996. Construction is scheduled to begin in late 1996 or early 1997.

Site Facts: An agreement was reached with 14 parties potentially responsible for site contamination to pay for cleanup of the Sullivan's Ledge Disposal Area. A separate agreement was reached with 15 potentially responsible parties to pay for the Middle Marsh Area cleanup.

Environmental Progress
Fencing the area has limited the potential for exposure to hazardous materials at the Sullivan's Ledge Landfill while final cleanup actions are being designed.

Site Repository
Wilkes Branch, New Bedford Public Library, 1911 Acushnet Ave., New Bedford, MA 02745

For more information about this site, contact Dave Lederer at 617-573-9665.

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NORWOOD PCBs MASSACHUSETTS

EPA ID# MAD980670566
EPA REGION 1
Norfolk County, Kerry Place in Norwood
Other Names: Grant Gear, Inc. and Dean Street Site

Site Description

The Norwood PCBs site is located on 26 acres of mainly commercial and industrial properties. The site is bordered by Route 1, the Dean Street access road, Meadow Brook, Pellana Road, and Dean Street. The site consists of several parcels of land, including the former Grant Gear facility; Kerry Place; and adjacent areas including Meadow Brook. In 1979, the site was subdivided. The northeastern portion of the site, approximately 9 acres in size, was purchased by Grant Gear Realty Trust and leased to Grant Gear Works, Inc. The southern and western portions of the site were further subdivided, a major portion of which was named Kerry Place. Most of the lots now are occupied by commercial and light industrial buildings. Beginning in the 1940s, previous owners or operators of the Grant Gear building used polychlorinated biphenyls (PCBs) in the production of electrical transformers and other electrical components. In 1983, the State detected high levels of PCBs in the soil on the site, and the EPA conducted an emergency removal of contaminated soil. Approximately 8,000 people live within 1 mile of the site.

Site Responsibility: The site is being addressed through Federal, Commonwealth, and potentially responsible parties' actions.

Threats and Contaminants

Groundwater is contaminated with PCBs and volatile organic compounds (VOCs) such as trichloroethylene (TCE) and vinyl chloride. Soil and sediments are contaminated with PCBs, polycyclic aromatic hydrocarbons (PAHs), and heavy metals. People are at risk when coming into direct contact with or accidentally ingesting contaminated groundwater, soil, and sediments. Risk may increase if on-site groundwater, left untreated, is used as a drinking water source. The concentrations of PCBs in the sediments in Meadow Brook may pose an increased risk to aquatic

organisms. Exposure to PCB-contaminated soils also may pose a threat to animal life inhabiting the site area.

Cleanup Approach

The site is being addressed in two stages: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status

Initial Actions: In 1983, the EPA conducted an emergency removal of over 500 tons of highly contaminated soil from the site and transported it to an approved disposal facility. In 1986, the Commonwealth of Massachusetts installed a 4-foot-high wire mesh fence around a 1«-acre portion of the northwestern and southwestern corners of the Grant Gear property and covered contaminated soils within the fenced areas. The cover consisted of a filter-fabric liner and 6 inches of crushed stone.

Entire Site: The remedies selected by the EPA in 1989 to clean up the site include excavating soils, dredge material, and sediments; treating them by solvent extraction of PCBs and disposing of them on site; flushing or replacing the site drainage system; cleaning equipment surfaces; collecting groundwater and removing the contaminants using air filtering to convert volatile chemicals to a gas (activated carbon will be used before or after the air filtration step to remove PCBs); and restoring the wetlands after minimizing the effects on the wetlands during the cleanup of Meadow Brook sediments. The facility to treat contaminated groundwater began operating in early 1996. In May 1996, the EPA published an amendment to the selected remedy at the site. This amendment called for demolition of the contaminated building on the site, excavation of contaminated soils and sediments from Meadow Brook, excavation of a "hot spot" of contaminated soil in contact with the groundwater, consolidation of contaminated soils and sediments onto a portion of the site and construction of asphalt cap and cover areas. The amended remedy is intended to promote reuse of the site property for commercial or industrial use. Contractors for the potentially responsible parties at the site completed the demolition of the building on the site in late 1996. Remaining cleanup work is expected to be completed during 1998. The EPA is working with the site cleanup contractors and interested developers to coordinate cleanup and redevelopment plans for the property.

Site Facts: The Commonwealth originally investigated the site in response to a telephone call from an area resident.

Environmental Progress

The initial cleanup actions described above have removed contaminated sources and restricted access to the site, thereby reducing the potential of exposure to hazardous substances at the Norwood PCBs site while final cleanup activities were being planned. All construction work associated with the cleanup is expected to be complete by the end of 1998.

Site Repository

Morrill Memorial Library, Walpole Street, Norwood, MA 02062

For more information about this site, contact Sharon Hayes, RPM (617) 573-5709

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MATERIALS TECHNOLOGY LABORATORY (USARMY) MASSACHUSETTS

EPA ID# MA0213820939
EPA REGION 1
Middlesex County, Watertown
Other Names: Watertown Arsenal

Site Description

The Materials Technology Laboratory (USARMY) (MTL) site occupies a total of 47 1/2 acres, with 36 1/2 acres located on the north bank of the Charles River, approximately 5 miles west of Boston. The facility was established in 1816 by President James Madison, and was originally used for the storage, cleaning, repair, and issuance of small arms. During the mid-1800's, the mission was expanded to include ammunition and pyrotechnics production; materials testing and experimentation with paints, lubricants, and cartridges; and the manufacture of breech loading steel guns and cartridges for field and siege guns. The mission, staff, and facilities continued to expand until after World War II, at which time the facility encompassed 131 acres, including 53 buildings and structures, and employed 1000 people. Arms manufacturing continued until an operational phasedown was initiated in 1967. In 1968, GSA sold approximately 55 acres to the Town of Watertown. This property was subsequently used for the construction of apartment buildings, the Arsenal Mall, and a public park and playground. MTL contains 15 major buildings and 15 associated structures. In 1960, the Army's first material research nuclear reactor was completed at MTL. The reactor was used actively in molecular and atomic structure research activities until 1970, when it was deactivated. The research reactor was decommissioned under the jurisdiction of the Nuclear Regulatory Commission in 1992 and the structure was demolished in 1994. At the time of the operational phasedown, much of the MTL property was transferred to General Services Administration (GSA). The current mission of MTL is materials testing, structural integrity testing, solid mechanics, lightweight armor research and development, and manufacturing testing technology. In 1987, the U.S. Army Toxic and Hazardous Material Agency (THAMA) initiated preliminary site studies, the first stage of the facility's closure plan. In late 1988, Congress officially recommended the closure of the facility. There is a private drinking water well located 2 1/2 miles

northwest of the property. The municipal drinking water within 4 miles of the site is supplied by surface water sources located to the west of MTL and is unaffected by the site. The Charles River is used for recreational boating, swimming, and fishing. The active portion of MTL is completely fenced and public access is restricted. MTL closed in September 1995.

Site Responsibility: The site is being addressed through Federal actions.

Threats and Contaminants
Polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and pesticides have been detected in the soil. The chlorinated solvents, tetrachloroethylene and trichloroethylene, as well as other organic compounds such as xylene, 1,3 dimethylbenzene, and oil have been detected in the groundwater. Various chemical and radiological contamination has been detected in the storm and sanitary sewers, posing a threat to utility workers and possibly threatening the surface water and sediments of the Charles River. Radiological contamination was discovered in a number of the containers at the site and poses an additional risk.

Cleanup Approach
The site is being addressed in two stages: initial actions and a long-term remedial phase focusing on cleanup of the entire site.

Response Action Status
Initial Actions : Leaking underground storage tanks and drums containing mixed waste have been removed from the site. The nuclear reactor and associated buildings and structures were demolished in 1994.

Entire Site: The U.S. Army initiated site studies in 1991 and 1992. Once these studies are complete, the EPA will recommend alternatives for cleanup of the site.

Environmental Progress
The removal of leaking underground storage tanks, the decommissioning of the nuclear reactor and associated buildings and structures, and the removal of mixed waste have reduced the risk posed to the public and the environment while site studies leading to the selection of final cleanup remedies continue.

Site Repository
MTL Risk Reduction Office, Arsenal Street, Watertown, MA 02172-0001

Watertown Public Library, 123 Main Street, Watertown, MA 02172

For more information about this site, contact Mary Sanderson at 617-573-5707.

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